# Improvements To Water Tanker Supply In Ward No.05

# PMC

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**RUDRAPRASAD CONSULTANTS**
Structural Engineers, Architects &
Project Management Consultants

To,

Date: 05-09-2020

ASSISTANT EXECUTIVE ENGINEER
BYATARAYANAPURA SUB DIVISION
BBMP
BANGALORE

Dear Sir,

**Sub:** M/s. Rudraprasad Consultants Services for the work of "IMPROVEMENTS TO WATER TANKER SUPPLY IN WARD NO.05"

**Ref:** 1. Work Order No: BBMP/EE/BTP/WO/128/2019-20

2. Job code: 005-20-000009

We are here with forwarding to Executive Engineer, Karnataka Rural Infrastructure Development Ltd, #280, 59th Cross Road, 17th 'C' Main Road, 3rd 'Y' Block, Rajajinagar, Bangalore-560010. Second and Final bill duly verified and certified that the Work is satisfactory and for a Gross Value of RS.40,34,029.92/-(RS. Forty Lakhs Thirty Four Thousand Twenty Nine and Ninety Two Paisa Only). First and Part bill for Rs. 56,55,871.23/- was previously submitted, & the total bill amount submitted till date being Rs.96,89,901.15 /-(Rs. Ninety Six lakhs Eighty Nine Thousand Nine Hundred One and Fifteen Paisa Only).

Thanking you,

Yours faithfully,

**For Rudraprasad Consultants**

**R. KARTHIK RECHAN** B.E, M.S (U.S.A)
PRINCIPAL CONSULTANT
RUDRAPRASAD CONSULTANTS

RUDRAPRASAD CONSULTANTS BANGALORE

Attachments PMC Compliance report

#3, 7th Main Malleswaram, Bangalore – 560003
Telefax: 9180 23444801, Mobile: 91 9972924526
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**NAME OF WORK:-Improvements to Water Tanker Supply in Ward No.05**

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| **Name of Client** | : | EXECUTIVE ENGINEER, BYATARAYANAPURA DIVISION,BBMP, BANGALORE |
| **Contractor/ Agency:** | | Executive Engineer, Karnataka Rural Infrastructure development Ltd, #280, 59th cross road,17th 'C' Main road, 3rd 'Y' Block,Rajajinagara, Bangalore-560010. |
| **Estimated Cost** | : | RS - 99,00,000.00/- |
| **Date Of Inspection :** | | 05-09-20 |
| **Status Of Bill** | : | Second & Final Bill |
| **In the Presence of :** | | a) Assistant Engineer ,Ward no-5 ,Byatarayanapura division, BBMP, Bangalore<br>b) R. Karthik Rechan, Partner, M/S RUDRAPRASAD CONSULTANTS, BANGALORE |

| PMC COMPLIANCE REPORT | | |
|---|---|---|
| **Sl. No.** | **Description of work** | **Comments/Observations** |
| 1 | Supply of Drinking Water through water tankers of Capacity 5000 Liters Hiring of Water Tanker Hire Charges of Tractor 40 HP including Operator and Fuel. Procurement of Water --Rs. 216.00 / Load (5000 Liters) Considering 5000 Liters cost is Rs. 108.00/Load Considering 5 Loads/Day 5X108.00=540.00 Engaging Heavy Mazdoor complete and as per the directions of the Engineer-in-charge of the work | Work done upto the Billed Quantity and the Quality is satisfactory |

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| 2 | Geophysical investigation of site for sinking Borewell for supplying drinking water to the habitation either through the Hand pump, MWS of P.W.S.S by vertical electrical sounding by adopting Venner or Schlumberger's method, including reconnaissance survey of geological formation, Gerophysical investigation of existing Ground Wate in the vicinity, its quality & acceptability of the users indicating the location of site, recommended depth of casing pipe required to seal the top unconsolidated formation including an extra depth of 1.0 meter in consolidated formation for proper seating of casing pipe, depth of drilling required to cover full depth of aquifer proposed to be tapped, probable yield and other information required including transportation of instrument and accessories to work site., engaging techinical personal and labour required etc complete as per specifications and directions of Engineer in charge. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 3 | Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding coat of casing pipes, collars and cap etc.,) ,with all lead and lift, loading, unloading and labour charges etc., complete and as per the directions of the Engineer-in-charge of the work 0 to 50 m | Work done upto the Billed Quantity and the Quality is satisfactory |
| 4 | Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding coat of casing pipes, collars and cap etc.,) ,with all lead and lift, loading, unloading and labour charges etc., complete and as per the directions of the Engineer-in-charge of the work 50 to 100 m | Work done upto the Billed Quantity and the Quality is satisfactory |

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| 5 | Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding coat of casing pipes, collars and cap etc.,) ,with all lead and lift, loading, unloading and labour charges etc., complete and as per the directions of the Engineer-in-charge of the work 100 to 150 m | Work done upto the Billed Quantity and the Quality is satisfactory |
| 6 | Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding coat of casing pipes, collars and cap etc.,) ,with all lead and lift, loading, unloading and labour charges etc., complete and as per the directions of the Engineer-in-charge of the work 150 to 200 m | Work done upto the Billed Quantity and the Quality is satisfactory |
| 7 | Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding coat of casing pipes, collars and cap etc.,) ,with all lead and lift, loading, unloading and labour charges etc., complete and as per the directions of the Engineer-in-charge of the work 200 to 250 m | Work done upto the Billed Quantity and the Quality is satisfactory |

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| 8 | Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding coat of casing pipes, collars and cap etc.,) ,with all lead and lift, loading, unloading and labour charges etc., complete and as per the directions of the Engineer-in-charge of the work 250 to 300 m | Work done upto the Billed Quantity and the Quality is satisfactory |
| 9 | Sinking borewell of 165 mm dia clear using super fast hydraulic rig of capacity 250 PSIG & above CFM & above in all strats including over burden upto 20 mts fixing of casing pipes, collars and cap with necessary cutting, throading and welding including transportation of rig and supporing vehicles, crew charges and cost of consumables etc., complete including yield testing at the final depth with a minimum working of compressor for one hour (excluding coat of casing pipes, collars and cap etc.,) ,with all lead and lift, loading, unloading and labour charges etc., complete and as per the directions of the Engineer-in-charge of the work 300 to 370 m | Work done upto the Billed Quantity and the Quality is satisfactory |
| 10 | Supply of ISI mark 175 mm nominal bore medium black ERW casing pipe of 5 mm thick black electric resistance continuous welded mild steel tube material confirming to IS 1387 / 1993 & manufactured from hot rolled steel skelp / stripes in random length of 4 to 7 mts both ends threaded confirming to IS 554 / 1985, one end fixed with a socket and the other and with a plastic protection end (including of all taxes) ,with all lead and lift, loading, unloading and labour charges etc., complete and as per the directions of the Engineer-in-charge of the work. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 11 | Providing and fixing 250mm dia PVC Pipe and complete as per specification and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 12 | 175mm dia M.S. Casing cap complete as per specification and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |

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| 13 | M.S. Casing pipe collars 'C' Class complete as per specification and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 14 | Fabrication supplying and mounting MS box of 16 SWG suitable for floor /wall mounting, fully weather proof with provision for better heat dissipation, provided with hinged front cover, equipped with tamper proof locking arrangements, with suitable size clamps with necessary cable entry pipe with gland and box should be finished 2 coats of red oxide primer paint and finally finished with approved colour enamelled metal paint etc., complete box of 21600 sqcm with all lead and lift, loading, unloading and labour charges etc., complete and as per the directions of the Engineer-in-charge of the work. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 15 | Labour charges for erection as new /repaired submercible pumpset allong with GI pipe (32/50mm) cable (new submercible pumpset if required will be supplied by the department free of cost and released pumpset shoud be handed over to department including transportation (Each lenth =6.00) complete as per specification and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 16 | Erection of combined panel board meter board with all necessary materials and labour including providing CC 1:3:6 foundation bed etc,. Complete for basement out door type.(MR) complete as per specification and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 17 | Supplying and fixing of Porcelain fuse channel with cut out on existing wooden / panel using necessary nuts, bolts and washer etc.,with all lead and lift, loading, unloading and labour charges etc., complete and as per the directions of the Engineer-in-charge of the work. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 18 | Supplying and laying of LT UG cable having aluminum conductor PVC insulated sheathed, galvanized, steel wire/steel tape armoured cable with PVC outer sheathing 1.1 KV class 4 core 16 sqmm cable complete as per specification and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 19 | Digging of trench of 0.6m deep x 0.50 mtr wide refilling the trench to the required ground level and consolidating etc., complete sutting road surfaces complete as per specification and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |

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| 20 | Supplying and fixing of class A GI pipe on pole/wall/drain crossing with necessary clamping arrangements for UG cable of 1.1 KV class 40mm complete as per specification and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 21 | Supplying, fixing, wiring, earth electrode for grounding conduits, I.C. cutouts and other equipment's on the meter board using 40mm dia 2.90mm thick GI pipe 2.5 mtr long buried in a pit … The pit should be filled with equal proportion of salt and charcoal 150mm all-round the pipe to complete depth. The connection from the pipe to the conduit etc., is to be established through GI wire of size as per ISI specification 7.3.3. of IS 732 using 12mm dia bolts, nuts, washers and check nuts etc., the pipe shall have 16 through holes of 122 mm dia complete as per specification and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 22 | Supplying and fixing L.T. cast Iron pot heads suitable for 1.1 KV class 16sqmmUG cable filled with necessary bitumen/insulating compound complete with terminals, clamps, bolts, nuts and washers etc complete as per specification and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 23 | Supplying and fixing of polished wood board made of not less than 15mm thick plank on both sides with planks made out of not more than 2 pieces and fixing the same to the wall using tapered inverted wooden plugs screws etc.,Size 20 x 20 x 2.5 inches with all lead and lift, loading, unloading and labour charges etc., complete and as per the directions of the Engineer-in-charge of the work. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 24 | Borewell Cap and Clamp Set complete as per specification and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |

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| 25 | Supply and delivery at site brand New texmo/ innoval/ Lubi/ Sabar / Atalanta/ Calamal/ make suitable for vertical installation in 150mm dia bore well comprising of single stage or multistage CF pump close coupled by measns of stainless steel coupling to suitable HP suitable speed totally enclosed and filled with pure drinking water (Wet type) squirrel cage submersible induction motor suitable for opertation of 3PH., 50 Hz, 380/440 volts AC supply fitted with required aqccessories such as suction, casing suction strainers sand guard Non return value etc. complete . The pump and motor shall form an integral unit with all the required fittings 17.50 HP 30 stage complete as per specification and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 26 | Supply and delivery at site brand New texmo/ innoval/ Lubi/ Sabar / Atalanta/ Calamal/ make suitable for vertical installation in 150mm dia bore well comprising of single stage or multistage CF pump close coupled by measns of stainless steel coupling to suitable HP suitable speed totally enclosed and filled with pure drinking water (Wet type) squirrel cage submersible induction motor suitable for opertation of 3PH., 50 Hz, 380/440 volts AC supply fitted with required aqccessories such as suction, casing suction strainers sand guard Non return value etc. complete . The pump and motor shall form an integral unit with all the required fittings 20 HP 40 stage complete as per specification and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 27 | Providing, laying & joining GI pipes confirming to IS specification of approved make with fittings such as collars bends elbows tees nipples plugs with cuts threads using white lead & threads for joints wherever necessary as per direction including all lead & lift etc,. complete 'A' grade(excluding cost of fittings) 50mm dia GI pipe B Class complete as per specification and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 28 | Supply and fixing Collar for GI Pipes 50MM complete as per specification and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 29 | Supplying of submersible pump cable 1X3X6 Sqmm complete as per specification and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |

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| 30 | Supplying & delivery at site brand new / Essen / lotus sunsines/Adarsh/Gk controls best indigenous make combine energy meter-cum-control panel board unit of size 1200 x 600 x 300 mm minimum mechanically strong and vermin and water proof the unit shall have two detachable doors suitable for operation on 3ph,50Hz, 380/440 volts, AC supply with spring loaded latch locking with a key ribs should be provided inside the door canopy apron and louvers ventilators shall be provided the combine energy mtr cum control panel board unit suitable for operation on 3ph, 50Hz,380/440 AC supply shall be consisted etc., completed T panel board shall be fabricated on single unit in the above components panel board for suitable pumpset above components panel board for suitable pumpset above Up to 20HP with star delta starter (MR) complete as per specification and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 31 | Supplying & delivery of brand 50mm Gate Valve complete as per specification and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 32 | Supplying & delivery of brand 50mm Non Return Valve complete as per specification and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 33 | Supplying and fixing MCB complete as per specification and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 34 | Earthwork excavation for foundation of buildings, water supply, sanitary lines and electrical conduits either in pits or in trenches 1.5m and above in width, in Ordinary soil not exceeding 1.5m in depth including dressing the bottom and sides of pits and trenches, stacking the excavated soil clear from edges of excavation with lead upto 50m after breaking of clods complete as per specifications and directions of Engineer in charge. | Work done upto the Billed Quantity and the Quality is satisfactory |

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| 35 | Providing and installing at site of work 63mm (0.662) PVC Pipes of 6kg / cm2 including cost of pipes and specials and labour, including lowering into trenches, laying true to line, level and perfect linking at joints leak proof including joining of approved type with all labour and lift charges, handling charges including encasing the pipe alround to a depth not less than 15cms with gravel or selected earth available from the excavation etc., complete as per specification and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |
| 36 | Refilling available earth around pipe lines, cables in layers not exceeding 20cms in depth, compacting each deposited layer by ramming after watering with lead upto 50m and lift upto 1.5m including cost of all labour complete as per specifications and directions of Engineer incharge of work. | Work done upto the Billed Quantity and the Quality is satisfactory |

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ಬಿಬಿಎಂಪಿ, ಬೆಂಗಳೂರು-24

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